

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
19 February 2004 (19.02.2004)

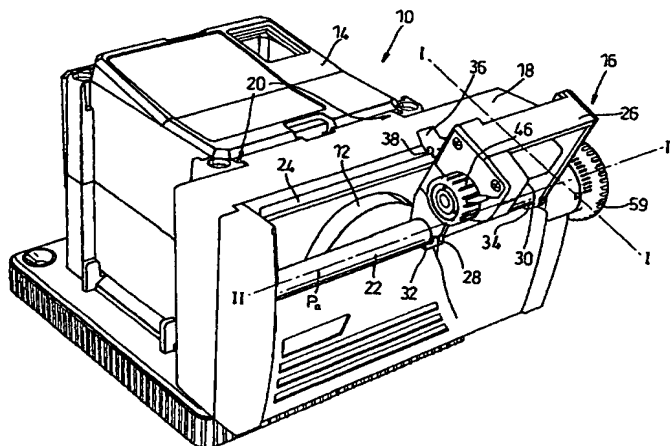
PCT

(10) International Publication Number  
**WO 2004/014605 A1**

- (51) International Patent Classification<sup>7</sup>: **B24B 3/36** (74) Agent: DEALTRY, Brian; Eric Potter & Clarkson, Park View House, 58 The Ropewalk, Nottingham NG1 5DD (GB).
- (21) International Application Number: PCT/GB2003/003453
- (22) International Filing Date: 7 August 2003 (07.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0218543.7 9 August 2002 (09.08.2002) GB
- (71) Applicant (for all designated States except US): **TURNER INTELLECTUAL PROPERTY LIMITED** [GB/GB]; Wetmore Road, Burton-on-Trent, Staffordshire DE14 1SD (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **HEPWORTH, Paul**, Steabben [GB/GB]; Stoneygate, Warwicks Bench Lane, Guildford, Surrey GU1 3TP (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report  
— with amended claims

[Continued on next page]

(54) Title: SHARPENING APPARATUS



(57) Abstract: A sharpening apparatus (16) for a blade-like cutting implement. The sharpening apparatus has an elongate body (18) and a cutting edge extending widthwise across one end of the body (11) at a predetermined angle relative to the longitudinal axis of the body (11). The cutting edge is formed by an inclined face formed on one side face of the body. The apparatus includes a cradle (26) for holding a blade-like implement to be sharpened and a mounting body for mounting the cradle (26) relative to a grinding surface. The cradle is mounted on a pair of guide rails (22, 24) for movement along a rectilinear path, the cradle including first and second rail followers slidably connected to a first and second of the guide rails respectively. The cradle (26) includes a seat for locating the blade-like implement at a reselected reference position on the cradle (26) such that the cutting edge of the implement to be sharpened is located parallel to said rectilinear path. The first rail and/or the first rail follower is adjustably mounted to enable the lateral position of the rectilinear path to be adjusted.

**WO 2004/014605 A1**



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

PCT/GB 03/03453

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B24B3/36

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 B24B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 225 806 A (TEMTOOL SALES PTY LTD) 16 June 1987 (1987-06-16) column 4, line 56 - line 63; figures	1,2,6,7
Y	---	3-5
Y	FR 615 617 A (GIRARD EMILE-ARMAND) 12 January 1927 (1927-01-12) page 1, line 43 - line 54; figures	3-5
X	US 1 143 383 A (GREEN) page 2, line 6 - line 54; figures	1
X	EP 0 471 490 A (MARTEK LTD) 19 February 1992 (1992-02-19) abstract; figures	1
	--- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*G\* document member of the same patent family

Date of the actual completion of the international search

5 November 2003

Date of mailing of the international search report

13/11/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Garella, M

# INTERNATIONAL SEARCH REPORT

PCT/GB 03/03453

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 259 814 A (GLASER ET AL.) 7 April 1981 (1981-04-07) abstract -----	1

# INTERNATIONAL SEARCH REPORT

PCT/GB 03/03453

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0225806	A	16-06-1987	EP	0225806 A2	16-06-1987
FR 615617	A	12-01-1927	NONE		
US 1143383	A	NONE			
EP 0471490	A	19-02-1992	AT	133099 T	15-02-1996
			AU	635658 B2	25-03-1993
			AU	8171291 A	13-02-1992
			CA	2048873 A1	12-02-1992
			DE	69116474 D1	29-02-1996
			EP	0471490 A2	19-02-1992
			US	5311703 A	17-05-1994
US 4259814	A	07-04-1981	NONE		